



MIAMI-SOUTH FLORIDA

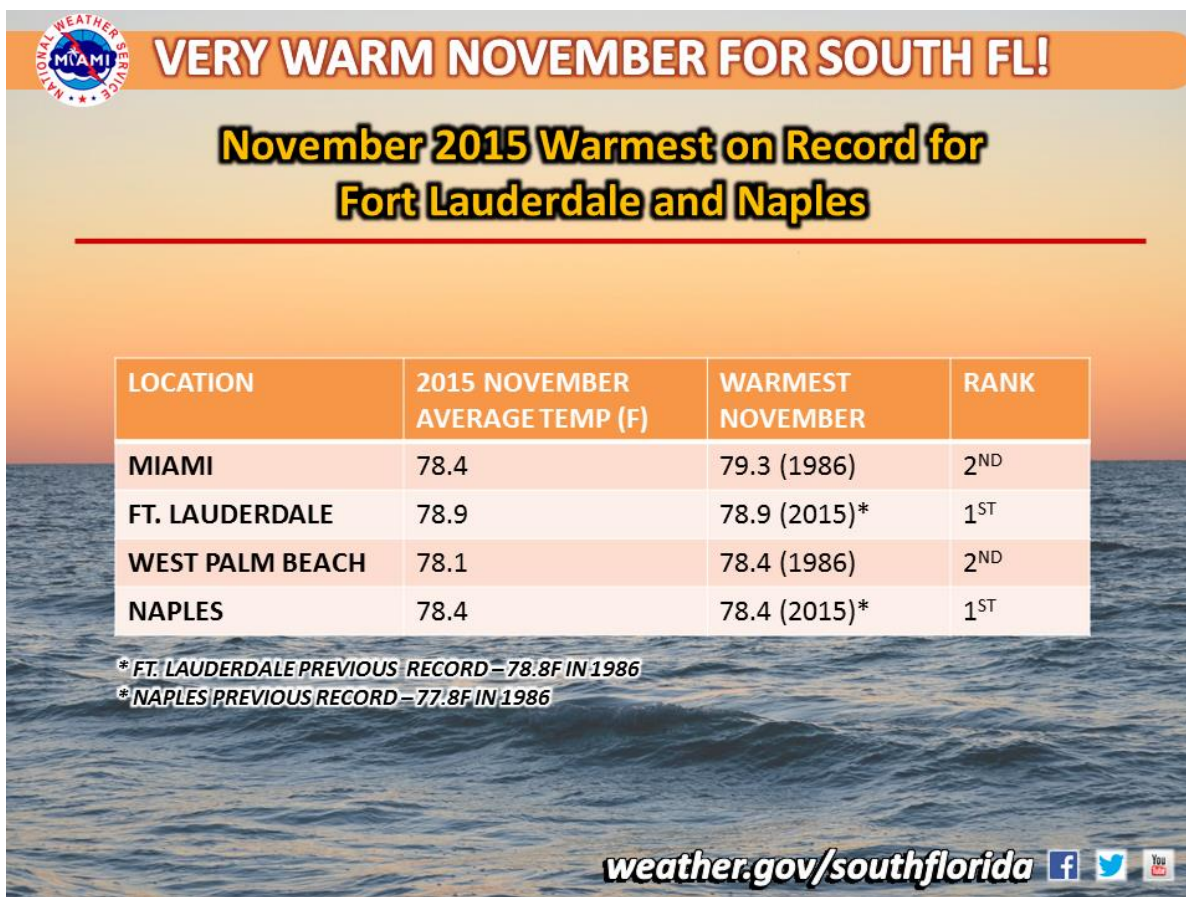
National Weather Service Forecast Office

<http://www.weather.gov/miami>

November 2015 Weather Summary

Unseasonably Warm

December 2, 2015: Temperature and humidity more typical of the middle of May predominated across south Florida in November. Average temperatures reflected in the image below are anywhere between 3 and 6 degrees above normal for November.



The main influence in last month's warm weather was a persistent and strong area of high pressure in the mid to upper levels over the eastern half of the United States (Figure 2). This pattern helped to keep cold fronts from making southward progress

across south Florida. The end result was a total of three fronts stalling near or just south of Lake Okeechobee and only one clean frontal passage. The coolest temperatures of the month (and the only time in which temperatures were below normal) occurred in the wake of the cold front which passed on November 22nd. Low temperatures were in the 50s and 60s across the area on the mornings of the 23rd through 25th. Below is additional temperature data for the four main climate sites.

- ***Miami International Airport*** had an average November high temperature of 84 degrees and an average low temperature of 73 degrees. The average temperature of 78.4 degrees was 3.5 degrees above the 30-year normal for November. The warmest temperature was 89 degrees on the 10th and the coolest was 63 degrees on the 24th. A total of six (6) daily warm minimum temperature records were either tied or broken.

For the fall season (September – November), it was the 2nd warmest on record with an average temperature of 80.7 degrees, falling just short of the record of 81.0 degrees set in 1986.

- ***Palm Beach International Airport*** had an average November high temperature of 84 degrees and an average low temperature of 73 degrees. The average temperature of 78.1 degrees was 5.3 degrees above the 30-year normal for November. The warmest temperature was 90 degrees on the 10th and the coolest was 60 degrees on the 23rd and 24th. A total of four (4) daily warm minimum temperature records were either tied or broken.

For the fall season (September – November), it was the 2nd warmest on record with an average temperature of 79.8 degrees, falling just short of the record of 80.1 degrees set in 1986.

- ***Fort Lauderdale/Hollywood International Airport*** had an average November high temperature of 84 degrees and an average low temperature of 74 degrees. The average temperature of 78.9 degrees was 3.4 degrees above the 30-year normal for November. The warmest temperature was 88 degrees on the 10th and the coolest was 62 degrees on the 24th. A total of 12 daily warm minimum temperature records were either tied or broken and one high temperature record was tied.

For the fall season (September – November), it was the warmest on record with an average temperature of 80.8 degrees, beating the old record of 80.6 set in 2007.

- ***Naples Municipal Airport*** had an average November high temperature of 86 degrees and an average low temperature of 71 degrees. The average temperature of 78.4 degrees was 6.3 degrees above the 30-year normal for November. The warmest temperature was 92 degrees on the 4th and the coolest was 57 degrees on the 24th. A total of 13 daily warm minimum temperature records were either tied or broken and six (6) high temperature records tied or broken, including the record for the month of 92 degrees on the 4th which was tied. Naples had five (5) days of temperatures of 90 degrees or higher, the most of any November on record.

For the fall season (September – November), it was the warmest on record with an average temperature of 80.5 degrees, beating the old record of 80.2 set in 1946.

Precipitation

After a dry first part of November with little rainfall across south Florida, the first in a series of stalled fronts on the 12th led to a wetter period which lasted for most of the remainder of the month. Most areas recorded above normal precipitation for the month (Figures 3 and 4), with anywhere from 4 to 8 inches across metro Broward and Miami-Dade counties. This wetter area extended west into the Everglades and Big Cypress areas all the way to portions of the Collier County coast. A few drier spots were noted, primarily in the southern Everglades, Palm Beach County and west of Lake Okeechobee where rain totals were below normal, in the 2 to 3 inch range. Miami Beach recorded its second wettest November on record with 8.75 inches of rain, while Miami International Airport had its 6th wettest November with 7.55 inches. According to [data from the South Florida Water Management District](#), it was the wettest November since 1998 for the district.

A stalled front on November 14th and 15th led to periods of heavy rain with as much as 3 to 4 inches of rain in less than 12 hours across parts of southeast Florida. This resulted in street flooding across parts of the area.

Below is a table of November rainfall, departure from normal and historical rank:

Location (Beginning of Period of Record)	November 2015 Rainfall (inches)	Departure from Normal/Rank
Big Cypress	2.46	
Brighton Reservation (Glades Co.)	6.09	
Cape Florida	7.00	
Canal Point (1941)	1.82	-0.85
Fort Lauderdale/Hollywood Int'l (1912)	4.88	+1.64
Fort Lauderdale Dixie Water Plant	5.06	+1.06
Fort Lauderdale Beach	6.87	
Fort Lauderdale Executive Airport	3.97	+0.45
Hialeah (1940)	5.31	+1.68
Hollywood (1963)	7.10	+3.86
Homestead General Airport (1990)	3.67	+1.08
Immokalee (1971)	1.76	-0.30
Juno Beach	2.65	
LaBelle (1929)	2.17	-0.03
Marco Island	5.01	
Miami Beach (1928)	8.75	+6.01/2nd wettest
Miami International Airport (1911)	7.55	+4.28/6th wettest
Moore Haven (1918)	1.64	-0.17
Muse	3.17	
North Miami Beach	8.11	
Naples East	5.53	
Naples Municipal Airport (1942)	2.98	+0.94
NWS Miami	5.92	
Oasis Ranger Station (1979)	2.32	+1.64
Opa-Locka Airport	6.40	+3.22
Ortona (1940)	2.26	+0.61
Palm Beach Gardens	2.17	
Palm Beach International Airport (1888)	3.06	-1.69

Pembroke Pines – North Perry Airport	6.27	+2.52
Pompano Beach Airpark	7.11	+3.68
Miami Executive Airport – W. Kendall	3.47	+0.77
The Redland (1942)	4.42	+1.45
South Bay (15S)	2.59	

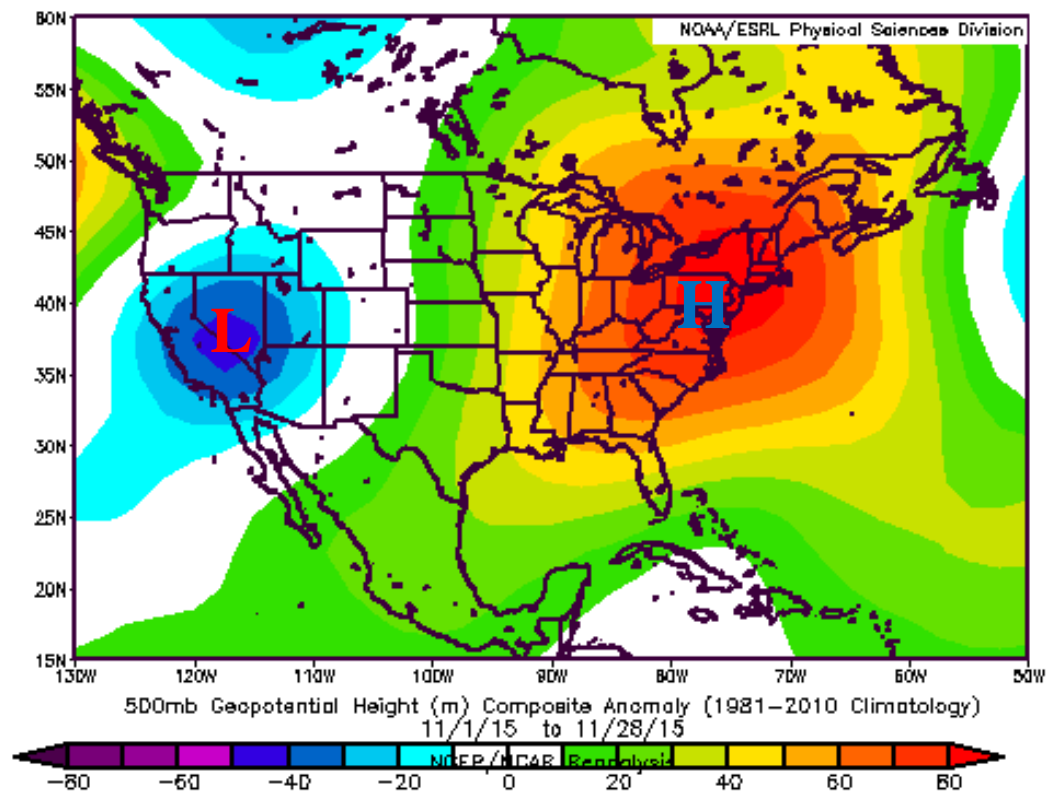
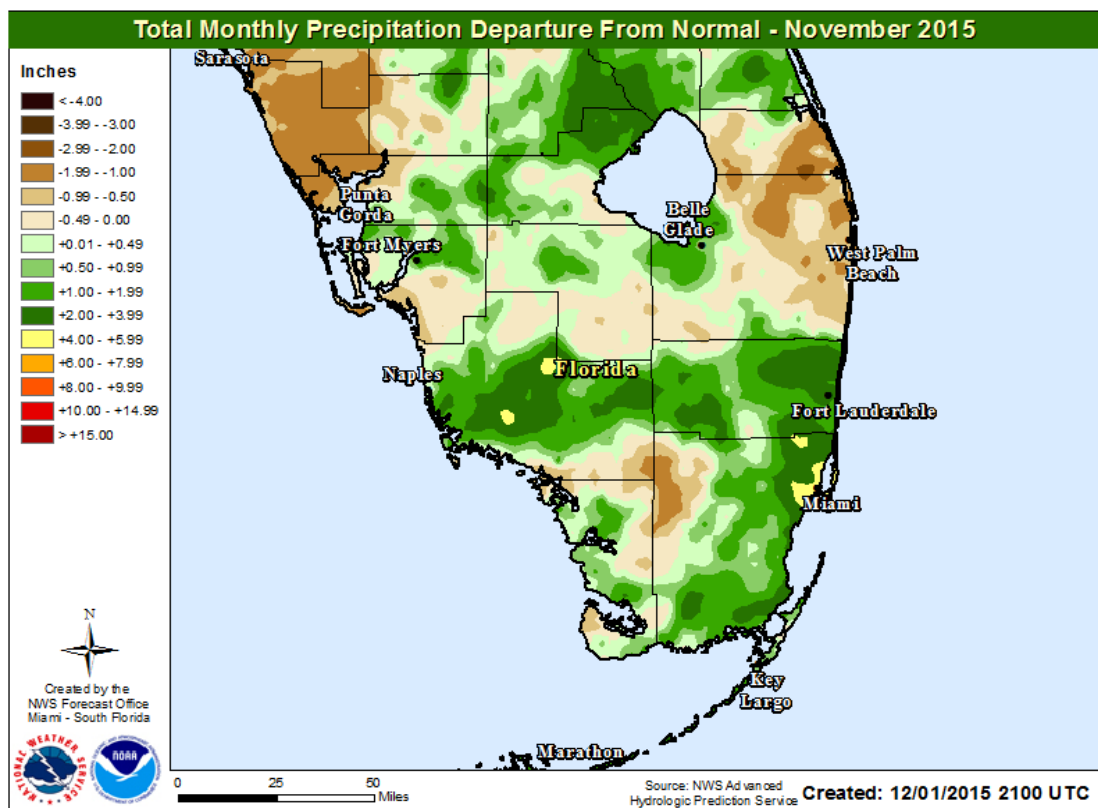
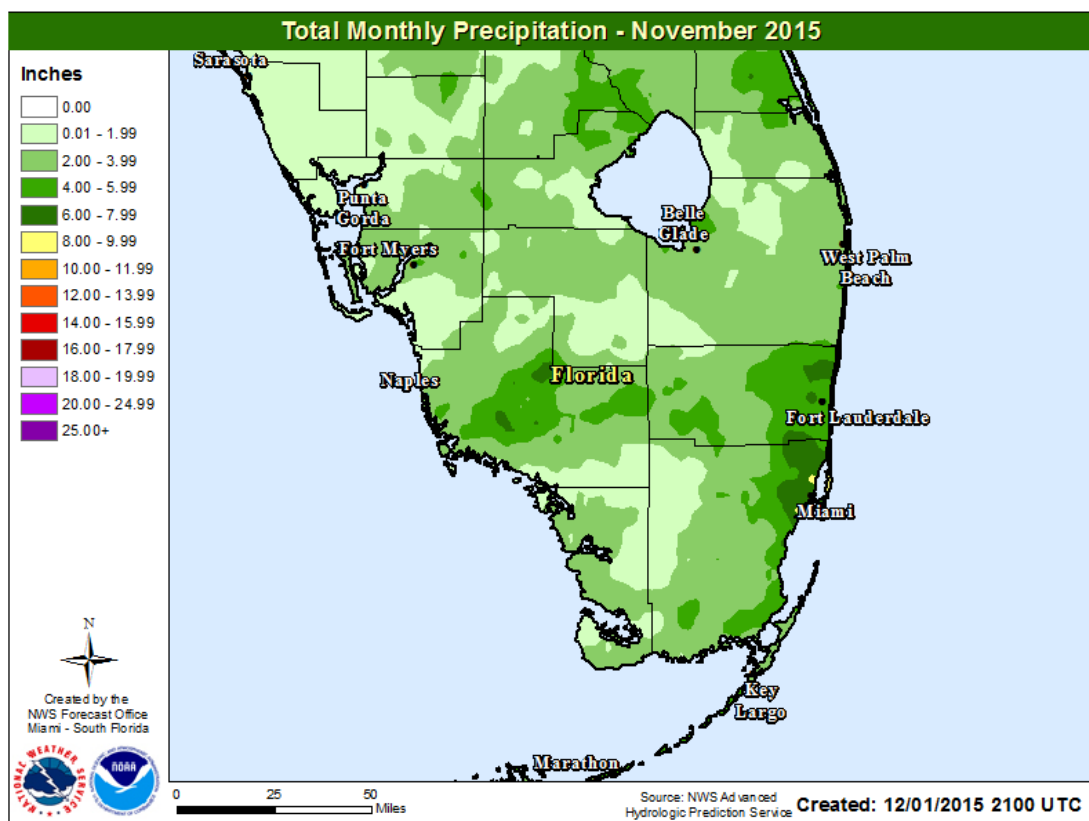


Figure 2: Mid-tropospheric (500 mb) height anomalies for November. Higher than normal heights over the eastern United States reflective of stronger than normal high pressure and lower than normal heights over the western United States indicating low pressure.



Figures 3 and 4: November precipitation and departure from normal

Outlook for December to February

Latest outlooks by the [NOAA Climate Prediction Center](#) (CPC, Figures 5 and 6) are for the current El Niño pattern to remain firmly in place through the winter. This means a rather high likelihood of above normal precipitation which is a typical winter sign of El Niño in the southern United States and Florida. The temperature outlook is a bit less certain, with the likelihood of continued warmer than normal temperatures in December possibly giving way to cooler than normal conditions in early 2016.


The main concern for the winter season is an increase in the number and frequency of low pressure systems affecting the Gulf of Mexico and Florida peninsula resulting from a stronger subtropical jet stream across the southern United States, a hallmark of winter El Niño. This sets the stage for an increase in storminess across Florida, including a higher risk of tornadoes, severe thunderstorms and flooding. There is also a tendency for more rainy winter days with possibly as many as 5 to 10 additional days with rain.

Element	Outlook Dec-Apr	Long-Term Normal Values/Frequency
Temperature	Below Normal	64-66F Interior/W 67-69F East
Precipitation	Above Normal	12-15” Interior/W 15-21” East 32-41 precip days
Storminess/Severe Weather	Above Normal	5-6 events per season (wind/hail/tornado/flood)
Freeze	Below Normal	At least one per season

All persons are urged to remain aware of weather conditions, especially those with the potential of producing severe weather across Florida. Below are some good tips to stay safe from severe weather this winter.

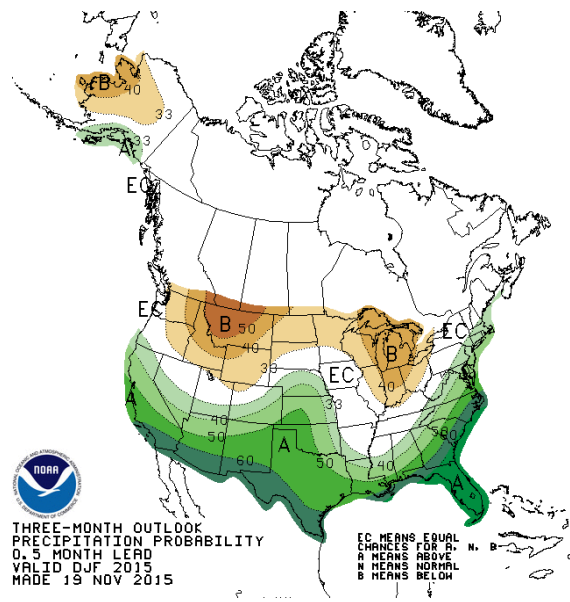
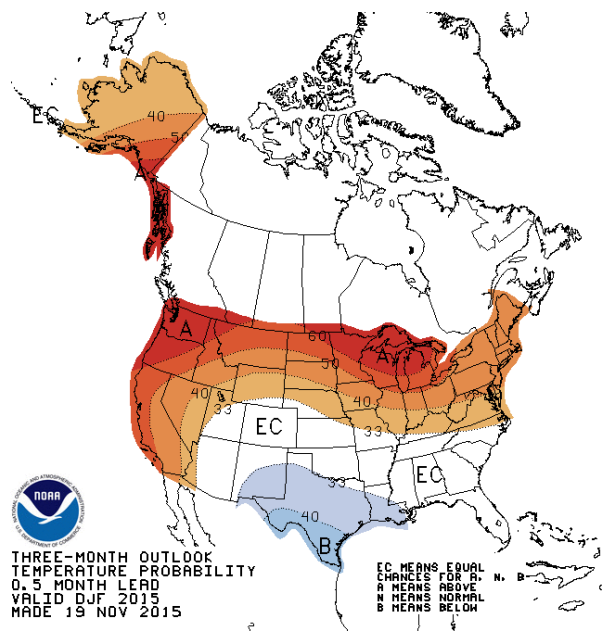
Florida El Niño Severe Weather Awareness

Public Awareness & Safety



- **Monitor local television and radio for severe weather situations**
 - ✓ Such evolving threats are typically identified a few days in advance, with more specific information about the most likely time(s) and location(s) of impact provided one day in advance
- **Have the ability to receive timely weather warnings**
 - ✓ This can save lives, especially with dangerous, night-time tornadoes
- **Have a dependable alerting feature or device**
 - ✓ Ensure that you have a **NOAA Weather Radio** (programmed, with fresh batteries) and/or the **Wireless Emergency Alert** feature on your cell phone (or NWS warnings relayed by text message from Emergency Management or Media, or another reliable app)

For the latest south Florida weather information, including the latest watches, advisories and warnings, please visit the National Weather Service Miami Forecast Office's web site at weather.gov/southflorida.



Figures 5 and 6: December-February temperature probability (left) and precipitation probability (right) from NOAA's Climate Prediction Center (CPC).